GOVERNMENT OF INDIA
WATER RESOURCES
LOK SABHA

UNSTARRED QUESTION NO:169
ANSWERED ON:13.08.2007
IMPACT OF DAMS ON FLOW OF WATER IN RIVERS
Sen Smt. Minati

Will the Minister of WATER RESOURCES be pleased to state:

(a) whether any study has been conducted to ascertain the impact of barrages and dams on the flow of water in the rivers:

(b) if so, the details and outcome thereof;

(c) the amount allocated for dredging of rivers; and

(d) the steps taken to ensure adequate flow of water in these rivers?

Answer

MINISTER OF STATE IN THE MINISTRY OF WATER RESOURCES (SHRI JAI PRAKASH NARAYAN YADAV)

(a) & (b)No Sir. No project specific study was conducted after the construction of barrages and dams on the flow of water in the rivers. However Central Water Commission (CWC) has been examining the hydrology and water availability of water resources projects during project appraisal stage before endorsing the project to the Technical Advisory Committee for Investment clearance of Planning Commission. A brief note on the Impact of Dams/ Barrages on Rivers is enclosed at Annexure-1.

(c) Does not arise; Government of India had constituted a Multi-disciplinary Committee in October 2001 under Dr.B.K.Mittal. Ex.Chairman, Central Water Commission to study the problem of silting of rivers which concluded that siltation is not pronounced and alarming. It opined that desilting of rivers is not an economically viable solution and is effective only marginally in minimizing the magnitude of flood, that too, for a short period. It has recommended that dredging in general was found to be ineffective and should not be resorted particularly in major rivers.

(d) 2nd meeting of Water Quality Assessment Authority (WQAA) held on 14.5.2003, constituted Working Group under the chairmanship of Member (RM), CWC to advise on the minimum flows in the rivers to conserve the ecosystem. The report of Working Group was submitted to WQAA during August 2007 and the report is yet to be accepted by the Authority and further course of action to maintain minimum flow of water in the rivers will be taken accordingly.

ANNEXURE-1

STATEMENT REFERRED TO Parts (a) & (b) IN REPLY TO LOK SABHA UNSTARRED QUESTION NO. 169 FOR ANSWER ON 13.8.2007 REGARDING IMPACT OF DAMS ON FLOW OF WATER IN RIVERS

The noticeable impact on river flows would be to the extent of the withdrawals and the evaporation which would take place from the impoundment which occurs due to the hydraulic structures on the river. Quantification has not been attempted for any project as yet in Central Water Commission/Ministry of Water Resources.

Whenever projects are examined from the Hydrology the overall utilizations of upstream projects are taken into account. This helps in firming up the water availability and the design flood series. The concept of series and parallel projects are studied instead of individual projects. There is a component of return flow (ranging from 7 to 10% of the application) from the utilisations that are projected and they tend to stabilize the low flows over the year. The projects on rivers help in attenuation of flood hydrographs which in turn mitigate the flood ravages. The surface storage of Water reservoirs recharges the ground water, thus ensuring year-long supply of fresh water to the nearby communities.

While the projects are scrutinized the impact of sedimentation on the life of reservoirs is studied. The Moody`s nomogram is extensively used to evaluate the trap efficiency of the catchment being studied. The trap efficiency of dams varies from 0.01 to 90% depending on the area where the dam is being considered. Provisions are suggested for flushing of the reservoir with sensitized digital transformation to increase the life of the projects. The periodic flushing ensures that the settled sediment in the reservoirs travel to the downstream and gives boost to the silt balance in the downstream river regime.